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ABSTRACT

The guide is designed to assist adult literacy and English-as-a-Second-Language staff developers, teachers, and administrators in using the World Wide Web as an instructional resource and to construct meaningful Web-based instructional activities and projects. It is divided into six sections. The first gives an overview of the varied capabilities of the Internet as an instructional tool, including an assessment of its strengths and weaknesses in the adult classroom. The second section looks at how to motivate staff, accommodate different learning styles, and make the most of limited computer resources. Section three provides basic information about the Internet and World Wide Web to help orient practitioners to this new instructional environment, including Internet history, important terminology, Web navigation and searching basics, and strategies for using search engines. Section four offers suggestions for sorting through the quantity of information and resources available online. The fifth section teaches a simple process for developing original Web-based lesson plans, presents some model lessons, and offers guidance in evaluating Web site content. The final section identifies opportunities for professional development available online. A directory of Web resources is appended. (Adjunct ERIC Clearinghouse on Literacy Education) (MSE)

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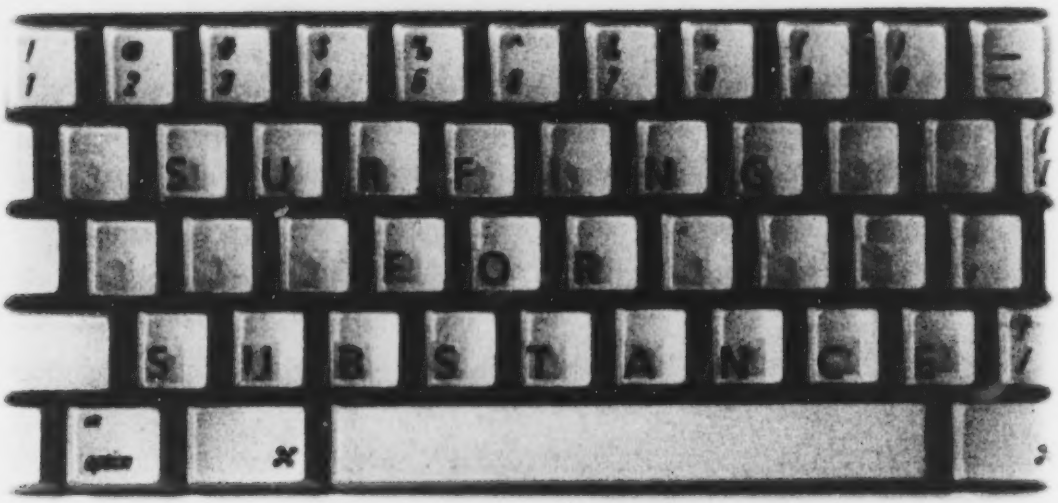

a professional development guide to integrating the World Wide Web into adult literacy instruction

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"The Internet as a teaching tool is a work in progress--one that is being produced not by individuals but by communities of learners, many of whom have come together through the new communications channels opened by technology. Its educational value ultimately will depend on what we put into it and what we do with the information we take out of it."

- Christopher Conte,
in a report for The Benton Foundation

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literacy assistance center

SURFING FOR SUBSTANCE:

a professional development guide to integrating
the World Wide Web into adult literacy instruction

emily hacker

in collaboration with mary ann capehart

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Emily Hacker and the staff of the Literacy Assistance Center

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introduction

Surfing for Substance is a guide for adult literacy and ESOL staff developers, teachers and program administrators who are interested in taking the plunge into the electronic surf, but need some simple, user-friendly pointers. The main goal of *Surfing for Substance* is to provide staff developers with a range of ideas and methods for introducing literacy teachers to the World Wide Web as an instructional resource. The title highlights one of our objectives – to help teachers learn how to construct meaningful Web-based instructional activities and projects.

Our approach to incorporating the World Wide Web into instruction focuses not on technology, but on educational goals. We view the World Wide Web as an incredibly rich, creative, flexible and democratic resource and tool. It is both a library and publishing house. Using the Web, anyone can be a reader, writer, researcher, publisher and artist - no advanced degrees or agents required.

It is in this spirit that this guide was produced. It is not intended to be a general "how to" manual or a technical guide (although basic information and links to other resources are provided). It is intended to provide some clarity, guidance and maybe even a little inspiration to adult literacy practitioners who are ready to dive in and explore this exciting new medium.

Surfing for Substance was developed by the Literacy Assistance Center through support from NetTech (Northeast Regional Technology in Education Consortium) as part of a year-long technology professional development project. In addition to this guide, the project included a series of instructional technology workshops and an intensive World Wide Web institute. The range of methods and materials that we explored in these professional development activities helped us understand what works and what doesn't work in using the World Wide Web as an instructional resource.

How to Use This Guide

Surfing for Substance is divided into six sections. Section One, *Why Use the Internet for Instruction?* provides an overview of the different capabilities of the Internet as an instructional tool. An informal assessment of the Internet's strengths and weaknesses in the adult learner classroom is also provided through a look at some actual learner and teacher experiences with online technology – both positive and negative.

Section Two, *Laying the Groundwork for Staff Training*, covers several critical issues - such as how to motivate staff, how to accommodate different learning styles and how to make the most of limited computer resources – that staff developers and administrators should consider when including the Internet as a component of staff development. Section Three, *What Do Teachers Need to Know to Get Started?* provides basic information about the Internet and World Wide Web that will help orient practitioners to this new instructional environment. You will learn a little Internet history, important terminology, Web navigation and searching basics, and strategies for using Internet search engines.

Section Four, *Selecting and Evaluating Web Sites,* provides guidance for practitioners in how to sort through the mass of information and resources now available online and make informed choices about which resources are most effective and appropriate for instructional purposes. Section Five, *Designing Web-based Lesson Plans,* is the nuts and bolts of this guide. Here you will learn a simple process for developing original Web-based lesson plans, and examine a selection of model lessons developed by participants of the LAC's World Wide Web Institute. This section also covers the important issue of how to evaluate Web site content and design in order to assess their appropriateness for instructional use. In Section Six, *Professional Development and the Internet,* we identify a range of opportunities for professional development that are available online. These include joining listservs, participating in teacher e-mail groups, taking an online class, joining national and international educational technology organizations and subscribing to professional journals.

Throughout the guide you will find Web sites listed in the margins. These are recommended sites for further exploration of the topics they have been placed next to. This is not to suggest that these are not the only, or even "the best" sites on the topics, however we believe they are excellent starting points for your research.

section one

Why Use the Internet for Instruction?

Imagine the following scenario: a brand new library that houses an enormous collection of books, periodicals and other documents and audio-visual materials, and provides electronic access to library collections around the world, opens right next door to your literacy program. You immediately make appointments to bring your students to the library to help them get library cards and to teach them how to find and borrow materials. Your program director not only supports the idea, but provides release time for all the teachers to spend a few afternoons getting to know the library well enough to use its resources as an extension of the program's limited collection of instructional materials.

It would be difficult to find an educator who would object to the above scenario. It makes perfect sense. However, if *library* is replaced with *Internet,* reactions are likely to change. This is unfortunate, because most literacy programs do not have easy access to libraries such as the one described above, but with even one Internet-connected computer teachers and learners can have access to extensive information and resources without leaving the building. In addition, just as there is more to learn in using a library than how to fill out a library card application and how to find and check out books, there are many not-so-obvious literacy lessons that come with learning to use the Internet. Some key literacy skills learned while surfing the Net are: sorting, categorizing, ranking, describing and evaluating. Users also learn graphical literacy as they learn to decode the wide variety of icons they encounter, and information literacy as they learn to identify reliable information on the Web versus inaccurate, commercial or otherwise biased information.

There are also significant benefits related to employability, parenting and sociocultural awareness and interaction. A student's familiarity with the Internet may be very appealing to a potential employer. In addition, students can use the Internet to research companies and jobs they are interested in prior to an interview. There are also Web sites with job postings where students can read about and apply for jobs online. On other Web sites, students can get assistance writing resumes and putting them online for potential employers to access. Students who are going to work for

the first time, returning to work after a long break, or changing careers can research different career opportunities online or e-mail professionals in fields of interest to get more information.

While many parents may never be able to keep pace with their children's appetite and aptitude for technology, learning basic Internet skills can help narrow the gap. With so many parents in adult literacy classes, the Internet can be a valuable resource for family literacy and parenting information. In addition, parents who are concerned with the kind of material their children might access on the Internet will be able to direct their children to appropriate, educational Web sites only if *they* have a working knowledge of the Internet and what's available online.

The Internet can also be invaluable in linking people culturally and socially.

- Imagine you are an adult literacy or ESOL student who has just learned to read English. Suddenly, on posters, billboards, advertisements, TV commercials and nearly everywhere else, you see nonsensical strings of letters, words and punctuation marks beginning with **http://www...** You look up *http* in the dictionary, but it's not there. Other people seem to understand what this code means, but you are left feeling frustrated and ignorant – and out of touch.

- Imagine you have just immigrated to the U.S. from the State of Kerala in India. You haven't met any other Malayalis (people from Kerala) in this country yet. You want to connect with Malayalis here and you want to keep up with news from home. You learn about a Web site called the **Kerala Homepage** at **http://www.keral.com,** that helps connect Malayalis around the world through a pen pal club and chat rooms. It also has links to several major Indian newspapers and other helpful Internet resources. You want to explore this Web site, but you don't know how to connect to it.

- Imagine you are learning about toxic waste in your GED class. You learn that there is a bill before Congress that would help reduce toxic waste. You want to tell your Congressman to support the bill, but you don't know how to contact him/her. Your teacher shows you a Web site where you can send e-mail directly to any Congressman or Representative. Five minutes later, you have e-mailed to Congress your opinion about the toxic waste bill. The next morning, you

receive e-mail from Washington, DC confirming that your message was received.

The scenarios above are all examples of different ways that the Internet provides windows to cultural and social life and interaction. Being left out of a cultural phenomenon as expansive as the Internet means missing out on myriad opportunities for actively engaging with society. The opportunities presented by the Internet are not better than, or replacements for, *real-life* activities, but they are windows to learning that adult literacy students should know how to open. Therefore, we feel the answer to the question in this section's title is another question - why *not* use the Internet for instruction?

Successes and Pitfalls

Anyone who has spent even minimal time online has probably experienced both the joys and frustrations of the Internet. So, while one of the goals of this guide is to encourage and inspire staff developers and teachers to use the Internet in instruction, we also want to present a candid picture of the potential highs *and* lows of life online.

THE LOWS

Waiting, Waiting and More Waiting

For a variety of reasons, you can expect to spend a significant amount of time waiting to get online or, when you finally get there, waiting for individual Web pages to load (that is, to be fed to your computer and appear on your screen). The problem may be faulty or slow hardware, limited capabilities of your Internet Service Provider or the Web site itself. Regardless of the reason, it's frustrating and tedious.

> **Tip:** If Web pages load slowly at your end because of hardware/memory limitations, you can speed things up by looking in the *Preferences* menu of your browser's tool bar for the option that prevents Web page graphics from loading. Text always loads much faster than images.

Information Overload

You want to stay on top of literacy news and policy and communicate with other literacy practitioners, so you join three *listservs* (e-mail subscription groups) - **National Literacy Advocacy (NLA)** and the **National Institute for Literacy's NIFL-**

ESOL and **NIFL-Technology** listservs. Suddenly you are receiving fifty or more e-mail messages every day. You can't possibly keep up. Frustrated and exhausted, you drop your subscriptions to all the listservs and become nostalgic for a time when all this information was not so readily available.

Tip: Find one listserv on a topic of high interest to you (many listservs are now archived on the Web, so you can browse through past messages before joining to see if it will keep your interest). Subscribe to that listserv and get involved right away by posting an introduction of yourself to the list. *Lurking*, the common practice of remaining a passive reader of listserv messages and not participating in the conversation, is not recommended. Until you are actively engaged, it is difficult to grasp the potential value of communication and resource sharing through a listserv.

Sick of Search Engines

Your class is developing a project for Black History Month. You want to locate some interesting Web sites your students can use for their project. You do a search for **"black history month"** on **Altavista**, and you get a list of over 33 *million* Web pages! Using Infoseek, your search is reduced to 7 *million* Web pages. It would take months to go through those lists -- and who would want to? There's got to be a better way to find good Web sites.

Tip: Use Search Engines when you have no other leads for finding what you are looking for. A better and more direct route to Web sites is through other related sites. You can find leads to instructional Web sites in most education and educational technology journals and magazines. In addition, many literacy organizations publish their own newsletters, like the LAC's **Literacy Update**, that regularly feature Web site reviews. Most good Web sites will have compiled their own list of favorite links on the same topic. You will find these lists under headings like: **Other Internet Resources, Links, Cool Sites,** etc. Good webmasters (professionals who oversee Web site content, programming and design) are dedicated to providing useful links on their sites, so take advantage of their hard work and save a lot of time as well.

Access Aggravations

Although the Internet is inherently a democratic *environment*, the politics and economics of gaining access to the Internet are not. Wealthier school districts have more and better computer equipment than poorer districts. Adult literacy programs run by small community-based organizations are considered fortunate if they have a handful of donated 386 PC's running DOS – relatively archaic equipment. While there are many different projects attempting to upgrade wiring and telecommunications equipment and capacity in poorer communities, these initiatives are often mired in politics and bureaucracies and may not materialize as promised.

> **Tip:** Investigate your community for hidden resources. Is there a public school with a computer lab that would be willing to time-share with an adult literacy program? Would your request be more appealing if you developed an innovative intergenerational computer project with children and adults working on a project together? Would businesses in your neighborhood that regularly upgrade their computers be interested in donating equipment to your program? Is there a public library with Internet access nearby, and could you arrange to take your class there for regular, scheduled visits? Could you form a consortium with a large group of literacy programs and apply jointly for government infrastructure grants?

THE HIGHS

Here are a few real examples of how some adult literacy learners and teachers have used the Internet to their advantage:

Achieving Computer Literacy & Developing Leadership Skills

Archie Willard is a dyslexic adult who learned to read at the age of 54. Inspired by his success in a literacy program, he became an advocate for adult literacy and won a research fellowship with the **National Institute for Literacy**. During the fellowship year he was introduced to the Internet, and was initially resistant because he disliked computers. He became more interested, however, when he found Web sites on learning disabilities and dyslexia. He then got an e-mail address so he could communicate with the other **NIFL** fellows and join the **National Literacy Advocacy** listserv. Soon after, he decided that adults with learning disabilities should have a Web

page devoted to their needs, so he created the **Archie Willard Learning Disabilities Home Page** at **http://207.28.234.137/archiew.html.**

Using the Web to Prepare for a Job Interview

An ESOL student in Boston was preparing for a job interview. A few weeks earlier her class had been introduced to the Web. She asked her teacher if he thought the company interviewing her had a Web site. He told her she should use a Search Engine to find out. The student found the company's Web site and looked through it carefully, learning everything she could about the company. Using this information, she was able to prepare excellent questions to ask at the interview, and she mentioned the Web site during the meeting. The interviewer was very impressed that she had taken such initiative. The student got the job.

Making Connections Through E-mail

A student at one of the **Brooklyn Public Library Adult Learning Centers** wrote stories regularly. At the same time, he had been reading and enjoying Tana Reiff's books for adult learners. He liked her books and thought she might want a story idea from a student. Since he had learned how to use e-mail and the World Wide Web at the Learning Center, he was able to use an Internet search engine to look up Tana Reiff's e-mail address. He e-mailed her a story he had written and she promptly e-mailed him a response. They continued to correspond by e-mail for some time. This was fun and motivating for the student because Tana Reiff addressed him as a writer and was very supportive of his work.

Using the Internet for Staff Development – 1

A group of ESOL and BE teachers from across New York State were enrolled in a year-long Leadership Institute. At the second meeting in New York City, their Inquiry Group was scheduled to meet to work on a collaborative research project for the Institute. One of the group members had a family emergency and had to remain at home in Syracuse, New York. Instead of missing the meeting, she went online from her home computer and met with her Inquiry Group in an Internet Chat Room. The Chat Room enabled the group to continue working together, even though they were geographically separated.

Using the Internet for Staff Development – 2

Thirty-two ESOL and BE teachers from New York, Connecticut, Maine, Massachusetts, Pennsylvania and Rhode Island participated in a month-long World Wide Web Institute. In addition to the hands-on sessions in New York City and Boston, the participants communicated regularly through a listserv and weekly Internet Chats. In their online communications they shared ideas and experiences about integrating technology into instruction, recommended interesting Web sites to one another and sought advice on technological and instructional issues. During the Institute, the teachers learned how to design Web-based lesson plans. The lessons they created are on the Web at **http://www.lacnyc.org/technology/institute /gallery.htm.**

section two

Laying the Groundwork for Staff Training

Contrary to popular opinion, the greatest obstacle to integrating technology into instruction usually is not lack of equipment. The biggest obstacle for most literacy programs is lack of staff training in instructional technology. Although computers have played a role in K-12 education for several years now, their introduction into adult literacy education is relatively new, thus there are only a handful of adult literacy professionals with expertise in educational technology. In addition, with the current emphasis on work readiness in adult literacy programs, computers have been seen more as tools for teaching clerical skills than as resources for learning across the curriculum.

In this section, we'll try to debunk a few myths and provide some simple suggestions and activities to help build your in-house expertise in integrating technology into your curriculum.

Myth #1

I need to be a *techie* and know a lot about computers before I introduce my students to the Internet.

Fact

a. The World Wide Web has made navigating the Internet a very intuitive, non-technical experience.

b. There is nothing wrong with learning about the Internet along with your students. Those students who have a high aptitude for computers will enjoy having the opportunity to teach you something.

c. Did you wait until you understood all the inner-workings of a camera before you took your first photograph?

Myth #2

The Internet is only relevant to my teaching staff.

Fact

a. Education administrators use the Internet for numerous reasons, including communicating with colleagues, keeping up with literacy news and policy, learning about grants and other funding opportunities, and researching critical issues in the field (i.e. welfare reform).

National Institute for Literacy
http://novel.nifl.gov

b. Job developers and coaches use the Internet for locating job openings, posting situations wanted, posting student resumes, researching job market statistics, learning about specific companies, and exploring fields of interest with students. Beyond basic research, innovative job developers create *virtual tours* of various companies and professions by guiding students through a series of Web sites where they can answer prepared questions or exchange e-mail with a professional.

What Color is Your Parachute
http://www.washingtonpost.com/wp-adv/classifieds/careerpost/parchute/front.htm

c. Counselors use the Internet to find information and resources on issues they regularly confront, including domestic violence, substance abuse, mental illness, child care, housing and welfare reform. Working with a Web-savvy counselor, for example, a student whose landlord threatened her with eviction can learn about tenants rights by reading the Housing *Fact Sheets* available at the **New York State Division of Housing and Community Renewal (DHCR)** web site at: **http://www.nycrgb.com/DHCRFACT.html**.

Welfare Information Network
http://www.welfareinfo.org/

Myth #3

My teachers attended a workshop on how to use the Internet in instruction. Therefore, I don't need to provide any additional staff development about the Internet.

Web Teacher
http://www.webteacher.org/winnet/indextc.html

Fact

The Internet is vast, as is its potential as a learning tool. A single workshop will barely scratch the surface of its usefulness. Teachers and other staff need a variety of opportunities and time to learn about and explore the Internet. Just as valuable as structured learning experiences (and even more valuable, some would argue) is having time to freely play and explore online. The attached lesson, *Staff Development on the Internet: Playing to Learn,* suggests several fun, user-friendly things Internet surfing beginners can do online to get their feet wet.

Some tools lend themselves to ongoing staff development. With a little incentive and encouragement e-mail is an excellent way to get staff online. In addition to being able to send and receive messages, an e-mail address will enable your teachers to subscribe to listservs and to participate in interactive areas on web sites. Even if only one computer is available for staff usage, all staff can have free, web-based e-mail accounts using **http://www.yahoo.com, http://www.rocketmail.com or http://www.hotmail.com.**

Since people have different learning styles, and learn at different speeds, it is good to offer a variety of possibilities for technology staff development. These can include formal classes and workshops, one-on-one mentoring with a colleague or technology coordinator (if yours is one of the rare programs that have one) and forming a Technology Team. Put very simply, the more you give (staff development opportunities), the more you will get (staff with innovative ideas on how to integrate technology into literacy instruction).

Myth #4

I can't use the Internet for instruction because my program only has one Internet-connected computer for student use.

Fact

We are not going to tell you that having only one computer is not an obstacle. It is. However, it is not insurmountable. With some creativity on your part and flexibility on your students' part, a lot can be made of this single resource. The best way to integrate the Internet in this context is to use it as one of many resources students draw on while working on a class project.

To demonstrate this strategy, imagine your class is doing a project on HIV/AIDS. You divide your class into 4 groups. Group 1 is searching the Internet for current information on HIV/AIDS, group 2 is reading and summarizing recent newspaper and magazine articles, group 3 is interviewing a community health worker and group 4 is conducting a survey on what students in the program know about HIV/AIDS. Depending on the length and goals of the project, the next day or week the groups rotate assignments, giving another group the opportunity to use the computer. Keep track of the groups to make sure that during the course of the term each group has had equal time online.

In addition to using the computer in class, you can go *low-tech* and use Internet resources off-line by printing out pages from Web sites. If you have access to a projection system (i.e. an LCD panel), you can look at Web pages with your whole class. You can also purchase software, like Web Whacker, that allows you to download entire Web sites to disk for offline use. Finally, if you have regular free reading time, add exploring the Internet to the mix of options and set up a rotating schedule for your students to follow.

LESSON PLAN
Staff Development

Staff Development on the Internet: Playing to Learn

Directions: Teachers working individually or in small groups can select one or more of the following simple activities to do on the World Wide Web.

Intended Users: Teachers just being introduced to the Web.

Goal: To provide a fun, non-threatening introduction to the Web and to teach basic Internet searching skills.

1. Plan a dream vacation

   Steps: A. Choose a dream location for your vacation

   B. Go to **Yahoo** at **http://www.yahoo.com,** an Internet Search Engine and select **Travel Agent** from the list of options.

   C. Within the travel directory, scroll down to **Research Your Next Trip**, and select one of the provided destinations or activity categories to start you on your research and planning. If you have a specific destination in mind, you can search for it directly by entering the name of your destination in the search bar.

   D. Browse through the list of Web sites Yahoo returns to explore hotels, restaurants, sights and other activities.

   E. Plan your itinerary.

2. Make a reading list

   Steps: A. Go to Amazon at **http://www.amazon.com** or Barnes & Noble at **http://www.barnesandnoble.com** – the two largest online bookstores.

   B. Search by subject, authors of interest, or browse through best sellers. Read book reviews submitted by other visitors to the Web site.

   C. Print out reviews of books that interest you and make a reading list for yourself or your classes, or a holiday list of books you'd like to give as presents.

3. Plan a five-course meal

   Steps:
   A. Decide on the type of cuisine you'd like for your meal (i.e. vegetarian, Indian, Italian or Japanese).
   B. Go to **Hotbot** at **http://www.hotbot.com,** an Internet Search Engine.
   C. Click on **Hobbies and Interests**.
   D. Click on **Cooking.**
   E. Click on the letter in the alphabetical index for the type of cuisine you are interested in (i.e. *C* for Chinese). Find the category you are looking for and click on it.
   F. Browse through the Web sites **Hotbot** returns and plan your five-course meal.

4. Plan a virtual class field trip

   Steps:
   A. Think of some possible landmarks, museums or notable sites anywhere in the world that your students would be interested in learning about.
   B. Go to **Altavista** at **http://altavista.digital.com,** an Internet Search Engine.
   C. Enter the exact name of the location or museum (i.e. Smithsonian Institute) in the key word bar and hit enter.
   D. Browse the Web sites **Altavista** returns to see if the location has a Web site. Search for a few different locations until you find one that has a comprehensive, well-designed Web site. You may have to make your searches very specific, depending on the location. For example, a search for **Natural History Museum** will return a list of hundreds of natural history museums around the world. To narrow your search to the museum in New York, you can type **Natural History Museum +New York.** To learn additional strategies for narrowing searches, click on the *help* button located above the **Altavista** search bar.

5. Send a virtual postcard

   Steps:
   A. Go to **The Electric Postcard** at **http://persona.www.media.mit.edu/postcards/**
   B. Read the instructions for sending a virtual postcard.
   C. Click on **Postcard Gallery** and select your postcard.
   D. Click on the card you selected and fill out the form.
   E. Click on **Mail the postcard**.

6. Research your family history.

   Steps:
   A. Go to **Cyndi's List of Genealogy Sites** on the Internet at **http://www.CyndisList.com/**
   B. Scroll through the categories and choose one that will help you get started researching your family history. Cyndi's List is comprehensive, with over 30,000 genealogy Web resources, so choose a category quickly to avoid list burn-out.
   C. Scroll through the Web sites listed under the category you chose and select a few sites to try. Do a surname search or try searching one of the other family history databases provided in the list of Web sites.

section three

What do Teachers Need to Know to Get Started?

Before using the Internet in the classroom, take the time to acquire a working knowledge of the environment and to discover some of its pitfalls and pleasures on your own. You don't need to become a techie in order to use the Internet in the classroom, but the more you know about the Internet environment, the more creative you can be in discovering ways to integrate it into your instructional plans. The following very brief account of the Internet and the World Wide Web will help you understand the major historical landmarks of a very interesting technological and cultural phenomenon. Understanding basic Internet terminology, and how to get connected, navigate and search on the Web will get you going and broaden your comfort zone with the computer.

What Exactly is the Internet?

Whatis.com
http://www.whatis.com

The Internet is people-to-people communication on computers, a global broadcasting system and an information infrastructure. The Internet is the largest computer network system in the world. Through it thousands of networks connect computers to other computers by means of modems and phone lines or high speed wire connections. No one party owns the Internet. Business, government and universities administer and maintain the system and the protocols (languages/codes) needed. The Internet has many different components and uses, including e-mail, usenet (news groups), chat rooms, telnet, ftp (file transfer protocol) and the World Wide Web. Note that the Web is one part of the Internet. They are not one and the same, although advances in Web technology are making the differences less visible.

How did the Internet get Started?

Internet Society – All About the Internet
http://info.isoc.org/internet/history

In 1962, J.C.R. Licklider, a computer researcher at MIT, wrote a series of memos envisioning a Galactic Network – "a globally interconnected set of computers through which everyone could quickly access data and programs from any site."[1] Licklider was acting head of the Defense Department's Advanced Research Project Agency (DARPA). It was during the Cold War and the Defense Department wanted to

1 B.M. Leiner, V.G. Cerf, D. D. Clark, R.E. Kahn, L. Kleinrock, D.C. Lynch, J Postel, L.G. Roberts, S. Wolff, "Brief History of the Internet", archived at **http://www.isoc.org/internet-history/brief.html**

create a communications network that could withstand heavy bombing and not be disabled. Meanwhile, the technology necessary for transmitting large amounts of information over such a network was studied by various government think tanks and researchers in universities here and abroad. In 1966, the product of this research began to come together as ARPANET (Advanced Research Project Agency's Network)– the beginnings of a "galactic network."

In 1969, ARPANET, the first Internet linked together four geographically distant computers in the U. S. Eventually, every university with defense-related funding was added to ARPANET. In the early seventies, network users began developing applications (programs) such as e-mail software, and protocols (the programming "keys" that allow networked computers to communicate with each other) for the network. Besides serving as an emergency military communications system, the Internet quickly evolved into a powerful communications tool for scientists.

Soon other scholars came online, including those in universities overseas. In the mid-eighties, the National Science Foundation developed a new network named NSFNET to handle the increase in traffic. However, soon, ARPANET and NSFNET could not handle the demand for service. Along with new protocols an improved, high-speed network was developed, which is the Internet as we know it today. It wasn't until the early 1990's, however, that companies began to offer access to home and local users. From it's humble beginnings as a Defense Department network with a handful of users, today the Internet is regularly used by 57 million people in 150 countries.

How did the World Wide Web get Started?

The World Wide Web is a user-friendly lens through which to read documents on the Internet. Prior to the development of the Web, Internet users needed to know a complex computer language called UNIX to navigate through cyberspace. That all changed in the late 1980's when a physicist named Dr. Tim Berners-Lee developed HTML (Hypertext Markup Language) – a computer language that enabled documents on the Internet to be linked together – and paved the way for the user-friendly, *point and click* environment of today's Web. In 1998 Berners-Lee received a MacArthur Genius Grant for his pioneering work. In 1992, Marc Andreesen took

Internet 101 - What Is The Web? http://www2.famvid.com/i101/web.html

the next step in opening up the Internet for the general population. Andreesen developed the first Web browser (pre-Netscape and Explorer) - a computer program called the NCSA Mosaic that made it easier to view Web sites, including those with graphics, video, animation and sound. Andreesen went on to develop Netscape.

As growing numbers of people began to visit Web sites, individuals, government, nonprofit organizations, educational institutions and businesses soon realized that the Internet was a significant new publishing and advertising medium and the explosion of Web site creation was underway. **The White House** (**http://www.whitehouse.gov**) went online in 1993, followed by the **United Nations** (**http://www.un.org**) in 1994 and the **Vatican** (**http://www.vatican.va**) in 1995. By 1995, shoppers had found a new landscape for pursuing their passion, at the thousands of online stores and catalogues that began proliferating on the Web. Pioneering commercial online services like Prodigy, Compuserv and America Online that previously offered subscribers access to pre-Web Internet services like e-mail, bulletin boards, chat rooms and news groups, now developed their own browsers and began offering access to the Web. From then on, Web usage skyrocketed and continues to do so today. These numbers illustrate the phenomenal growth of the World Wide Web since the first publicly accessible web site was put up in 1993.

Growth of the WWW
June 1993 – there are 130 web sites on the Internet
April 1998 – there are more than 15,000,000 web sites[2]

Connecting to the Internet

To connect to the Internet you need a computer, a modem and a phone line. You also need to select an ISP (Internet Service Provider) or Commercial Online Service. ISPs are usually small to medium size local companies that provide *no frills* Internet access (although some are connected to particular organizations or communities and offer subscribers access to private bulletin boards, chat rooms and other related services). Commercial Online Services are national companies (such as America Online and CompuServe) that provide *full service* Internet access, as well as members-

2 Hobbes' Internet Timeline V. 3.3
http://info.isoc.org/guest/zakon/InternetHisotry/HIT.html

only features such as news, chat rooms, shopping, games, travel planning and a variety of other services. Commercial Online Services give you an all-in-one package including a Web browser and e-mail capability. If you subscribe to an ISP you'll need to install (or download) e-mail and Web browser software, like Eudora and Netscape.

Navigating the World Wide Web

There are three primary navigational tools on the Web:

URLs (and bookmarks)

hyperlinks

search engines.

URLs

URL stands for Uniform Resource Locator. It is the address for a Web site on the Internet. URLs begin with HTTP, which stands for Hypertext Transfer Protocol. WWW is the name of the server that hosts the Web site. Not all Web servers are called www, so you will encounter URLs that begin with other names. For example, the **National Institute for Literacy (NIFL)** URL is **http://novel.nifl.gov.** The Domain Name comes next – this is name that identifies the company or organization that put up the Web site. Domain Names end with suffixes that indicate whether the institution hosting the Web site is a commercial organization **(.com),** an educational institution **(.edu),** a government organization **(.gov),** a network service **(.net),** a military organization **(.mil)** or another type of organization **(.org).** To obtain a Domain Name for a Web site, you must register the name with an organization called InterNIC and pay a small annual fee to keep the name.

.edu	**education**	**http://www.nyu.edu**
.org	**organization**	**http://www.lacnyc.org**
.net	**network**	**http://www.internic.net**
.gov	**government**	**http://www.whitehouse.gov**
.mil	**military**	**http://www.navy.mil**
.com	**commercial**	**http://www.nytimes.com**

Using URLs

If you have the **URL** for a site you wish to visit, simply type it into your browser's

location bar and press the Enter key. In a few moments, the Web page you requested will be displayed on your screen. You can avoid having to remember and repeatedly re-type lengthy URLs by *bookmarking* them (or, if **Internet Explorer** is your browser, adding the URL to your *favorites* folder). *Bookmarks* or *Favorites* are pointers, saved on your computer's hard drive, to sites you want to remember or revisit. They are extremely helpful in the classroom. Instead of having students key in lengthy URLs – not a very worthwhile literacy lesson – students can pull down the Bookmark list for a particular lesson to easily link to the Web sites you selected.

Using Hyperlinks

Hyperlinks are the keystone of the Web. They are the links that connect Web pages to each other. Hyperlinks may take you to different parts of a single Web site or to entirely new sites. Web site designers provide hyperlinks to other sites to help you find more information on similar or related topics.

Usually a link appears as text that is underlined, bolded, or in a different color than the rest of the text. Images, sound and video can also be hyperlinked. Sometimes identifying the links on a Web page is not that easy. Here's a tip: whenever you place your cursor on top of a hyperlinked word or image, the cursor will change from an arrow to a hand with a pointing finger. Clicking on this text or image will automatically take you to a new Web page, play a sound file or video, or take you to a new Web site.

Using Search Engines

The Spider's Apprentice
http://www.monash.com/spidap.html

Search engines are like indexes or catalogues to files on the Web. Search engines match key words that you provide with those in Web documents they have indexed. When you enter your information, the search engine provides you with a hyperlinked list of Web pages that most closely (or, occasionally, most obscurely) match what you are looking for. Some search engines also provide general categories to choose from (also called directories). These links lead you to more and more specific category lists. When you have drilled down to the appropriate category level for your topic, you view titles and descriptions of relevant Web sites and link to them.

Every search engine has its own system for searching, organizing and displaying information. Therefore, it will save you a lot of time and frustration if you read a

search engine's *help* files before you begin. There are many search engines, but a few of the most popular are **Yahoo** at **http://www.yahoo.com, AltaVista** at **http://www.digital.altavista.com, Infoseek** at **http://www.infoseek.com** and **Excite** at **http://www.excite.com.** You can access search engines directly or by using the search button provided by your browser.

To get a sense about how a search engine could help you in the classroom, take a look at the following two examples. Imagine that your ESL class is reading *The House on Mango Street* by Sandra Cisneros. Your learners are interested in learning more about the author and finding out about what else she has written. You go to a search engine and type in the words **Sandra Cisneros author**. In a few moments, the search engine displays a list of matches. You scroll down the list of titles and descriptions and see links to a short biography of the author, a bibliography of her work, an interview, and a multi-cultural teacher's guide. You preview the sites and decide which ones will be most valuable for your learners. You are then ready to prepare a lesson on Sandra Cisneros that will incorporate one or more of the Web sites that you found.

Imagine, again, that you are teaching about the workings of the U.S. government in the Social Science section of a GED class and you need a copy of *The Preamble of the United States Constitution.* You decide to see if you can find it online. You go to Yahoo and see a list of categories including: **Arts & Humanities, Business & Economy**, and **Government.** Click on **Government** and a new list of categories is displayed. Click on **Documents.** Another page loads with a list that includes the headings **Constitutions, Libraries and Treaties, Pacts and Agreements.** Click on **Constitutions,** scroll through the list of countries and click on **United States**. Now you see a list of Web sites with titles such as **The Constitution of the United States of America,** or **United States Constitution Search,** or **Our Constitution** etc. You try one site, but find you must purchase a copy of the Constitution. The next site you select has the text of U.S. Constitution, in its entirety, for free. You print it out and make copies for your students.

Since search engines are a necessary, but often confusing, Internet tool, it is a good idea to provide teachers and students with some guidance on using them. Here is a simple and flexible lesson you can try for teaching Internet searching basics. Once

you understand how the lesson is structured, you can change the items teachers and learners search for to correspond with your curriculum or specific themes. For example, you can modify this lesson to focus on writers and artists, women's history or scientists and inventors. Please note that you should not include any items in the lesson that you have not first searched for and found on the Web yourself. Wild goose chases through cyberspace are very frustrating, especially for beginners.

LESSON PLAN
Search Engines
Teacher Preparation

Search Engine Scavenger Hunt

Objective: To learn how to search the World Wide Web using Internet Search Engines

Search Engines used:

Altavista:

http://www.digital.altavista.com

Infoseek:

http://www.infoseek.com

Yahoo: http://www.yahoo.com

Excite: http://www.excite.com

Teacher/Staff Developer Preparation:

1. Familiarize yourself with the different searching strategies accepted by each of the search engines listed above. Each of these search engines has a **help, tips** or **advanced searching** file you can read at their Web site.

2. Whether you are using the hand-out below without any changes, or selecting your own items, search for each of the items on the different search engines yourself to give you a sense of the process your learners will go through.

3. Read about how search engines work, how to plan effective searches and how the top search engines compare with each other at **The Spider's Apprentice** at **http://www.monash.com /spidap.html.** Print out any appropriate pages for your teachers/learners.

Lesson Steps

1. Conduct a demonstration of a Web search with the whole group. Discuss what search engines can and can not do for you on the Web. Discuss the differences between key word searching and browsing through subject indexes (i.e. **Yahoo**). Ask a participant to suggest a topic or item he or she would like to search for. Brainstorm a list of key words, word combinations and categories you might use to find this item using a search engine.

2. Divide the group into four teams. Assign each team one of the search engines listed above. Distribute the handout.

3. Each team will attempt to locate every item on the handout using their assigned search engine. On the handout, they will record the strategies they use to find the items, the name and address of the Web sites where they find them and any other comments about their searches.

4. After forty-five minutes, or when most teams have finished, bring the teams together for a group discussion. Ask the teams to compare the Web sites where they found each item and to discuss and compare the different search strategies they used.

LESSON PLAN
Search Engines
Handout

Search Engine Scavenger Hunt

Search Engines used:

Altavista:
http://www.digital.altavista.com
Infoseek:
http://www.infoseek.com
Yahoo: http://www.yahoo.com
Excite: http://www.excite.com

Directions:

Your team should use the search engine you have been assigned to find Web pages containing every item listed below. In your answer, describe the search strategies your group used to find each item.

Find:

1. An adult literacy organization in Australia

2. A map of the Dominican Republic

3. A self-portrait of Frida Kahlo

4. Langston Hughes poem, *Dream Deferred*, and Hughes' birthplace and birthdate

5. The weather today in Honolulu, Hawaii and Anchorage, Alaska

section four

Selecting and Evaluating Web Sites

Evaluating World Wide Web Information
http://thorplus.lib.purdue.edu/research/classes/gs175/3gs175/evaluation.html

Web site evaluation is an integral part of using the Web as a resource and instructional tool. The convenience, speed, sheer volume of information and dazzle of multi-media imagery found on the Web can lead people to have a false sense of confidence about the information they find online. However, there are no set criteria for what information can be posted on the Web. While this is one of the qualities that makes the Internet such a democratic resource and tool – it is not a publishing and teaching environment that is limited to experts – it also suggests that teachers must thoroughly review sites they intend to use in the classroom. The freedom of the Internet means that information of all kinds, from all types of sources (reliable to laughable) can be found on the Internet. Let's say, for example, that your class is doing a project on racism in America. A student wants to do research on the history of the Klu Klux Klan. She does a key word search on Excite for **Klu Klux Klan.** The list she gets will include links to a wide range of Web sites, from the reliable – **American History Online - The Victims of the Ku Klux Klan (1935)** to the laughable – **Aryan Dating Page,** as well as links to Klan-sponsored sites. Clearly, students should be briefed about what's available on the Web before embarking on their search.

Other important Web site selection criteria concern site design and structure. Some sites are so large that students may get distracted by too many extraneous links or get confused as to where to go next. In this case, specific Web pages should be bookmarked or mapped out for students beforehand. In some cases, it may be helpful to give students printed copies of certain pages on a Web site to preview together in class. When they see the material online, it will be familiar and will help the students focus on the lesson rather than the technology. On other sites, the best material is found in sound or video files that take too long to download or require specific software you may not have.

Some sites may look educational, but a closer inspection reveals their commercial or purely political purpose. The lessons on these sites may be designed around a video or textbook that you have to purchase (and can do automatically, using their online

order form). While some politically motivated sites may be wonderful sources of primary materials, others are filled with slanted and occasionally inaccurate information. Even purely research oriented or educational sites should be evaluated beforehand. Going to what seems to be a good educational site may land you in the middle of a curriculum that is wonderful, but too ambitious for your goals. Or, a site that has a wealth of information about your topic may be written at a level too difficult for your learners. Take the time, however, to explore other resources linked from the site. You might find something more suitable.

Keep in mind also, that Web pages are fluid and constantly changing. Unlike printed material, material on the Web can be revised, updated, moved or deleted virtually overnight. A site you visited two weeks ago may not contain the same information two weeks hence. Be sure to preview Web sites yourself and double-check them on the same day you plan on using them with your students.

With so many different elements to consider when evaluating Web sites, it can be helpful to use a prepared questionnaire or checklist. We invite you to use the following *Web Site Evaluation Questionnaire* to assist you in selecting the best sites for your lessons. Remember that the nature of Web technology requires you to add some new methods of evaluation to those you would normally use for print or media resources. Here are reminders about what makes the Web a unique source of information and therefore unique in terms of evaluation:

- Anyone who owns or has access to a computer can put up a Web page and, with some work, make it look impressive.
- Not all authors of Web pages are identified, and there is no standard location for author identification on sites.
- Companies use the Web to sell services and products but this may not always be obvious at first glance.
- Political and religious groups use the Web to disseminate their beliefs
- Material on the Web is not necessarily edited or reviewed.
- Some material on the Web may be morally offensive to teachers and/or learners and may contain inflammatory language, stereotyping and loaded words.

Web Site Evaluation

Web Site Title: _____ **URL:** _____

Purpose of using this site in your lesson: _____

_____

Authorship

Is the author/creator of the Web site clearly identified?

Are his/her institutional affiliations clearly identified?

Can you contact the authors directly by an easy-to-locate e-mail link?

Design and Navigation

Does the site download quickly? (A page should be completely viewable in under 30 seconds.)

Does the site provide a "site map" or index to its contents?

Do the navigational buttons or links give you a clear sense of where they will take you?

Can you get back "home" to the site's opening page in one click from anywhere within the site?

Is the overall design appealing or distracting?

Is the site accessible to "low-end" technology users or does it require high-speed hardware with the latest versions of browsers and plug-ins loaded?

Content/Information

Is the information provided reliable – is it possible to verify the author's or organization's credentials?

Is it written at a level and in a style accessible to your students?

Will the content help you achieve the objectives of your lesson plan?

Are there opportunities on the site for interaction with other teachers and learners?

Is the site free of bias and stereotypes?

Currency

Can you easily locate the date when the site was last updated?

Has it been updated recently?

Is the content of the site time-sensitive (i.e. related to news or policy) and, if so, is it current?

section five

Developing Web-based Lesson Plans

What is a Web-based lesson?

A Web-based lesson is simply a lesson that in some way incorporates a Web site or many Web sites. A Web-based lesson can be conducted entirely online or it can be a traditional classroom lesson with an online component. In this guide, we will refer mostly to the latter. A Web site can be used in a lesson for a variety of purposes, including research, reading, writing, publishing, communication and collaboration with teachers and learners around the world.

Teaching and Learning with Internet-based Resources
http://www.nifl.gov/susanc/inthome.htm

Using the Web in the classroom brings with it both new opportunities and new concerns. The variety and scope of resources and information on the Web can inspire original activities and facilitate the creation of lessons related to any subject you can imagine (as well as those you probably couldn't imagine). The variety of media found on the Web such as text, video and sound is not only exciting, but is also conducive to different learning styles. In addition, the interactive communication made possible through the Internet makes domestic and international collaboration between students, teachers and others an easy and affordable option for your curriculum.

The possibilities for designing Web-based lessons are endless. However, it is important to remember that no matter how exciting an individual Web site looks, educational goals are the priority in the lesson, not the Web site itself. It cannot be emphasized enough that how you structure your students' time on the Web plays a critical role in the success of a Web-based lesson. It is important to point students in the right direction and to shape the Internet environment as you would any learning environment. Aimlessly surfing the Web needs to be curtailed in the classroom. That would be equivalent to sending your students to the library and asking them to browse through all the stacks with no particular mission in mind. Therefore, a Web-based lesson should include specific steps describing how and when the Web site(s) will be used in the course of the whole activity. The following Web-based Lesson Plan Template may be used to help you design your first Web-based lesson with the above considerations in mind.

Web-based Lesson Plan Template

Date: _____

_____

Teacher: _____

Class/Level: _____

Topic: _____

_____

_____

Objectives (Learning Goals):

_____

_____

_____

_____

_____

_____

Web sites used

Name of Web site: _____

URL: _____

Rationale for selecting this site: _____

_____

_____

Name of Web site: _____

URL: _____

Rationale for selecting this site: _____

_____

_____

Other Materials:

_____

_____

_____

_____

Teacher Preparation:

_____

_____

_____

_____

_____

Steps for Learners:

Description of pre-computer/classroom activities (preparation)

Description of computer/online activities

Description of follow-up activities

Web-Based Lesson Plan Tour

From February through March 1998, the LAC conducted the *World Wide Web Institute for BE & ESOL Teachers and Staff Developers*, an intensive professional development activity. The institute was facilitated by the author and by David J. Rosen, Director of the Adult Literacy Resource Institute (ALRI) in Boston, MA. During the month-long event, thirty participants from all over the Northeast had both face-to-face and virtual (online) meetings. They explored and discussed the instructional possibilities of different Internet resources, including listservs, chatting and the World Wide Web. Their final project for the Institute was to design a Web-based lesson plan. All of their lessons are online in the LAC's **Web-based Lesson Plan Gallery,** at **http://www.lacnyc.org/technology/institute/gallery.htm.** The Gallery was recently recognized by the National Institute for Literacy as a *Top Ten* literacy site. We have selected six of these lessons to serve as Web-based lesson plan models. In addition, two lesson plans developed by the author are provided. Each has a different curricular focus and is designed for either BE or ESOL adult learners.

LESSON PLAN 1
Reading
Creator: Jana Sladkova

Using the Internet to Find Information About the Pyramids of Egypt

Background

We are reading *The Alchemist*, by Pablo Coelho in class. The main character, Santiago, is going to the Pyramids of Egypt to find a treasure. Since most students didn't know where Egypt or the Pyramids are, I wanted them to have a better idea of where the story takes place. Most students are first time Internet users with some computer experience.

Web Sites

http://pharos.bu.edu/Egypt/Wonders

Steps for Learners (a description of the process)

Students open Netscape (or other Internet Browser) and type in the URL. The URL will take them to a site about the Seven Wonders. By following the directions, they learn how to scroll, how to find and use a link and how to use the **Back** button.

Their task is to answer questions about the Pyramids. The students work at their own pace, so some may find more information than others. Answers are shared in class directly after the computer lab time.

1. Open Netscape (double click on the Netscape icon, or click one time and press **Enter**).

Class: Low level adult ESL

Topic: Pyramids

Computer Time: One hour

Objectives:

- To find information about the Pyramids of Egypt
- To get introductory knowledge of the Internet
- To get more comfortable with the computer

LESSON PLAN 1
Using the Internet to Find Information About the Pyramids of Egypt

2. Find **Location** on the screen and click on the box next to it.

3. When it turns blue, type **http://pharos.bu.edu/Egypt/Wonders** (Type carefully because the address must be EXACT) and press Enter.

4. There are seven drawings on this page. Using the mouse, point the arrow at the drawing on the left. The arrow should turn into a hand with a pointing finger. Any time you see this hand, it means that there is a link (connection) to more information.

5. Click on the left picture. You should now see information about the Great Pyramid of Giza. To read the whole page, use the scroll bar on the right side of your screen. You can move the information by putting the white arrow on different parts of the scroll bar, or on either arrow, and clicking.

6. Point the mouse (white) arrow on the arrow pointing down and click a few times. Observe the screen. If you want to see information on the top of the page again, click on the arrow pointing up.

7. Connections to other information can be a drawing, a photo, places on a map, or words that are underlined or printed in another color (usually blue). You will know by putting the arrow onto the underlined words or drawings. If the arrow becomes the pointing hand, then this is a link. If you click you will see new information.

8. Any time you want to go back to the previous information or page (the page before), click on the **Back** button.

LESSON PLAN 1
Using the Internet to Find Information About the Pyramids of Egypt

I would like you to find some information about the Pyramids of Egypt. You can do it by reading information on the screen and connecting to other links.

Try to find answers to the following questions:

1) Where are the Pyramids?

2) What is Cairo? Find some information about it.

3) How many Pyramids are there?

4) How high are they?

5) When were they built?

6) Why?

7) Who built them?

8) How long did it take to build them?

LESSON PLAN 2
History
Creator: Ngaio Schiff

African-American Inventors

Class: ESOL/GED Preparation

Topic: African-American Inventors

Computer Time: One hour

Objectives:

- To explore and successfully use the Internet for research.
- To practice reading, writing, and perhaps math skills.
- To increase awareness of the contributions of African-American inventors.

Web Sites:

African-Americans in the Sciences / Inventors site:
http://www.lib.lsu.edu/lib/chem/display/faces.html

African-American Inventors Bibliography site:
http://www.lib.lsu.edu/lib/chem/display/inventors_bibliography.html

Lemelson-MIT Prize Program: African-American Inventors of Our Times:
http://web.mit.edu/invent

African-American Inventors Series:
http://www.erols.com/tdpedu/blkin.htm

Background

The group consists of six ESOL students at the ESOL Somerville Center for Adult Learning Experiences (SCALE), ages 18-23, in a GED preparatory class that meets 8 hours per week. Five of the students are from Haiti, and one is from Cape Verde.

Students have used the computers for word processing, to run instructional software programs, to send/receive e-mail, and to conduct research via the Internet. Students are accustomed to projects with an interdisciplinary focus. In this particular lesson, science, history, writing, and math are all involved.

Throughout our examination of U.S. History, students have been particularly interested in the social roles and contributions of

LESSON PLAN 2
African-American Inventors

African-Americans. We have sought out information about African-American freemen/women, slaves, soldiers, explorers, statesmen/women, abolitionists, and scholars. We are about to learn about the Industrial Revolution. Students will read about several famous inventors, including Alexander Graham Bell, Benjamin Franklin, Thomas Edison, and Henry Ford. They'll also read about two African-American inventors, Jan Matzeliger and Garrett Morgan.

Steps for Learners (a description of the process)

a. Investigate at least one of the listed Web sites.
b. Choose an intriguing invention and find out about both the invention and the inventor.
c. Share your information.
d. Choose one invention you think has made the most profound impact on the world and write a paragraph/essay (depending on level) to explain your choice.
e. Think of an invention that would make your life easier. It does not need to be something you can actually build -- just a fantasy invention. Draw the invention and describe what it does. (If resources allow, students could produce a model or do a scale drawing to practice proportions.)

Follow-up

I would like to create a Web page for this lesson with links to all the above Web pages to allow students to easily access the sites. In addition, students inventions could be posted either on a classroom or Web-based bulletin board. Students could write and edit text to accompany their drawings. For a Web posting, they could scan in their drawings. They could also create links to other interesting invention pages.

Students could choose a common electrical or mechanical device that they would like to understand and conduct research on the Web to determine how it works and share the information with the class. Students with knowledge about how things work could inform the class. Students could expand on their inventions and make

projections about production costs or marketing. This could lead to discussions about patents, the stock market, and many other topics related to the business side of inventing.

LESSON PLAN 3
Workforce Preparation
Creator: Emily Hacker

Researching a Company

Class/Level: BE or ESOL, can be modified for most levels

Topic: Workforce preparation

Objectives:

- To learn how to find information about companies and jobs on the World Wide Web.
- To be able to critically evaluate information provided by a company to determine whether it is a suitable workplace for you.
- To understand and be able to use work-related vocabulary

Steps:

Teacher Preparation: Prepare a list of companies and their URLs. This can be done independently or as a prior class activity. See *notes to teacher* below for directions on how to find company Web sites to use in the lesson. For the purpose of the model I have pre-selected the following two URLs.

Web Sites:

Blockbuster Entertainment:
http://www.blockbuster.com/company_

Metropolitan Transit Authority: **http://www.mta.nyc.ny.us/**

Pre-computer/classroom activity:

Lessons in which students explore different jobs and careers, conduct career-related self-assessments and identify characteristics of a quality workplace are appropriate preparatory lessons for this Web-based lesson.

Computer/online activity:

Divide students into pairs. Ask each pair group to select one of the provided company Web sites (substitute your own list of URLs here) and answer the questions below using information provided on the site.

LESSON PLAN 3
Researching a Company

Company Name _____

URL _____

Answer the following questions based on information you find at the company's Web site.

1. Describe the products or services the company provides.

2. If the company/organization has a mission, philosophy or motto, what is it and what do you think it means?

3. What employee benefits does the company offer?

4. What jobs are currently available?

5. What educational background and work experience are required for these jobs?

6. Do you have the qualifications to apply? If not, what can you do to become eligible?

7. How do you apply for these positions?

8. Would you like to work for this company? Why or why not?

NOTE TO INSTRUCTORS:

To find other company Web sites, go to

1. **Monster Board** at **http://www.monsterboard.com** and click on **Companies.** Then search alphabetically or geographically.

2. Yahoo's Directory of Companies
http://dir.yahoo.com/business_and_economy/companies/

3. If you are looking for a specific company, you can use a Search Engine, such as **Yahoo** at **http://www.yahoo.com** or **AltaVista** at **http://www.altavista.com**

LESSON PLAN 4
Cultural Traditions/Art
Creators: Originally developed by Stacie Evans, Anna Rosa and Alvin Realuyo: modified by Stacie Evans

del Corazon

Class: GED Writing Class

Topic: Traditions/Art

Computer Time: Two hours

Objectives:

- To produce a short biography
- To produce a description and critique of an art piece
- To produce a description of a family tradition to be written and added to the **del Corazon** Website

Web Site:

del Corazon
http://nmaa-ryder.si.edu/webzine/featpage.htm

Steps for Learners (a description of the process)

Group Discussion

Write the word *tradition* on the board. Ask students what comes to mind when they hear/think about that word and write their responses on the board. You can help things along by sharing your own traditions as examples – family rituals, songs, family artifacts handed down from generation to generation, family gatherings. Discuss other meanings of tradition – as related to work, manufacturing, roles of men and women, music and art.

Internet Exploration and Group Writing

a. Divide class into three groups.
b. Ask students to go to the **del Corazon** Website:
   http://nmaa-ryder.si.edu/webzine/featpage.htm
c. Assign each group one of the featured artists: Agueda Martinez, Carmen Lomas Garza, Irvin and Lisa Trujillo
d. Have groups use the **Artistas** pages from the site to read about their artist. Each group must write a short biography of their artists. The biographies will be presented to the class later. (You may need to give suggestions on what to include: ages, where artists live, what their crafts are, how long they have been working at that craft, how they use their work, their other interests, etc.)

e. Each group should then explore their **Artistas** pages further, looking for links to pictures of the artists' work. Each group should choose one piece and write a short description and critique of the work.

f. Finally, have the groups explore the **Family Traditions** page(s) for their artists. Have them discuss what part the artists play in the carrying on of family tradition(s).

Class Discussion

Bring class back together. Have each group present their artist to the class. They can make their presentation however they choose -- read their biographical summary, discuss only the artwork, etc. Discuss the artists' connections to family traditions. Discuss the artists' connections to each other and to *tradition* in general. Return to the original "tradition" brainstorming on the board. Ask students to make connections between their original ideas and the work they've just done. How are their ideas about tradition similar to/different from the ideas they've read about on the Web site?

Individual Writing Exercise

Ask students to write about one of their family traditions -- stress again that the traditions can be work-related, rituals, crafts or skills taught or stories passed from one generation to the next, etc. Students can use the **del Corazon** pages as a model, but need not feel bound by that model.

Sharing/Publishing

The sharing can be three-fold - students can share their *tradition* stories with the class; students can add their stories to the **del Corazon** Webpage of reader traditions: **http://nmaa-ryder.si.edu/webzine/trad.htm;** student stories can be published in a chapbook.

LESSON PLAN 5
Environment
Creator: Tsansui Chow, Queensborough Public Library

Toxic Waste

Web Site:

Dangerous Debris
http://seawifs.gsfc.nasa.gov/OCEAN_PLANET/HTML/peril_marine_debris.html

Tutor Preparation: Get a world atlas showing *Ducie Atoll, Pitcairn Island, South Pacific.* Bookmark the Web site (above) on your class computers.

Learner Preparation (homework or class/small group brainstorming activity): Ask students to answer the following questions prior to conducting the Web component of this lesson:

- How many garbage cans or wastebaskets do you keep in your house?
- Do you have one in each room?
- Who takes care of the garbage in your home?
- Do you sort your garbage for recycling?
- On what days is the garbage collected on your block?
- Do you know of anyone who has gotten a ticket for not following the recycling rules?
- Where does your garbage go after it is picked up by the sanitation workers?
- Are there any similarities or differences in the ways garbage is

Class: Intermediate: ESOL

Topic: Toxic Waste

Computer Time: 90 minutes

Objectives:

To get students to discuss and share opinions about the garbage problem we face in NYC and around the world.

treated in the U.S. and your native country?

- What garbage have you seen at the beach?
- Where do you think these items come from?
- What do you think will happen to them?
- How far do you think garbage can travel in the ocean?
- Make a list of all the things your family throws out in a day.
- Make a list of the kinds of garbage you have seen at the beach (i.e. bottles, cans, diapers).

Steps for Learners (a description of the process)

In the classroom

a. Divide students into pairs to discuss the homework/brainstorm results.

b. Ask the pairs to report back to the whole group in turn.

c. Give out directions and ask students to locate Ducie Atoll on a world atlas.

d. Ask student pairs to make a list of 5 items they would expect to find on the beach of the remote island, Ducie Atoll, an uninhabited island almost 3,000 miles from the nearest continent.

e. Tell students about the scientific survey conducted on the island (details on the Web site).

f. Have students go to the **Dangerous Debris** Web page.

g. Have them scroll down until they see the title, *Even Desert Isles Become Dumps.* They can read about the study done on Ducie Atoll and look at the inventory of litter to check their predictions.

h. While they are looking at the inventory, ask them to write down the three most common and the three strangest items found on the list. (Explain unfamiliar vocabulary to students, if necessary.)

i. In small groups, have students compare these items to the items on their homework list of garbage found at the beach.

Follow-up

Homework: Take the 3 items you thought were among the strangest found at Ducie Atoll. Write a story tracing their journey to the South Pacific Island. Be creative.

LESSON PLAN 6
American Culture
Megan Connors

Soap Operas

Class: ABE

Computer Time: One hour

Objectives:

- To access a Web site and read its contents
- To participate in a chat group
- To write a summary
- To review the entire contents of a Web site and use prior knowledge of a soap opera to compose a character and plot summary
- To give a presentation based on written work

Web Site:

All My Children
http://www.geocities.com/TelevisionCity/5544/amc.html

Background:

I have written this lesson for a student in an Adult Basic Education setting. She avoids reading and writing because of learning disabilities. However, she enjoys using the Internet and she likes soap operas (especially *All My Children*).

Steps for Learners (a description of the process)

The student and a tutor will first discuss the Web and the definitions of various computer terms, including: downloading Web sites; URLs; and chat rooms. They will then review start-up procedures at the computer terminal. The student will access the Web site (with the tutor available to answer any questions) and study its contents.

She will choose a chat group and engage in discussion about the show. The tutor will be available to assist her as she logs off and properly shuts down the computer. Finally, she will summarize the show's plot lines and characters, using both prior knowledge and new material. This written work will then be used for a brief (10 min.) class presentation, followed by a question and answer period.

LESSON PLAN 6
Soap Operas

Follow-up

Evaluation

Student will be assessed primarily in terms of completing the entire assignment. The essential piece of this lesson is the written summary. The most important aspect of her presentation will be her comfort level (which will hopefully increase as a result of this experience).

LESSON PLAN 7
Global Studies
Creators: Martha Bordman & Beth Godley

Ask an Expert About Cuba

Class: ESL: advanced-beginner and intermediate

Topic: Cuban Culture

Computer Time: Two half-hour sessions

Objectives:

- To practice e-mail letter writing skills
- To form questions
- To report information
- To summarize information
- To learn about Cuban culture

Web Sites:

Pitsco's Ask an Expert
http://www.askanexpert.com/askanexpert

Steps for Learners (a description of the process)

Pre-Computer Time

Partner exercise:

Students write 5 "WH" questions (what, where, when, why, how) with their partner about information they want to know about Cuba or Cuban people.

Examples:
Where is Cuba?

What is the capital of Cuba?

When are the holidays and vacations in Cuba?

How long are the vacations?

Why do Cubans speak Spanish?

Whole class activity

Students write their questions on the board. The class corrects the grammar mistakes. Duplicate questions are crossed out and class helps generate replacement questions so that each pair of students still has 5 questions.

LESSON PLAN 7
Ask an Expert About Cuba

Computer Time

Day One

a. Students working in pairs type in the URL for the **Ask an Expert** Web site.

b. They click on **Categories.**

c. Students then click on **International/Cultural** category.

d. Finally, they click on **Ask a Cuban Expert** which brings up that site's E-mail page.

e. Student pairs e-mail their 5 "WH" questions to the Cuban expert.

Day Two

E-mail answer sharing

Once each pair has received answers from the **Ask a Cuban Expert,** the pair splits up and the class divides into groups of 3 to 5 students depending on the number of students in the class, and what seems most comfortable. Both members of each pair have a copy of the e-mailed answers they received. Each student tells the rest of their group what he/she learned about Cuba from the Cuban expert. The other students in the group discuss the information and take notes about what they've learned. Students then divide into new groups with different students to learn more about Cuba and repeat the swap described above. (Alternative--Students mingle one-on-one to exchange information. They must talk to at least 5 different students.)

Follow-up

Students write a summary of the information they've learned about Cuba. This type of lesson can be used for any of the "Ask an Expert" categories.

Note for Teachers:

It is strongly recommended that you contact the expert your students are going to e-mail prior to conducting this lesson to inform them of your plan. If you get a positive response from the expert and he or she is ready and willing to receive and

respond quickly to your students' e-mails, then you've got a green light. If you get no response or a cool response, then keep trying until you find a more receptive participant.

LESSON PLAN 8
Immigration
Creator: Jana Sladkova, Lower Eastside Tenament Museum

Virtual Field Trip to the Lower Eastside Tenement Museum

Class: ESL or BE

Computer Time: One Hour

Objectives:

- To learn (or practice) basic Internet navigation skills
- To find and summarize information on a Web site
- To learn about tenement life in the Lower Eastside in the late 19th and early 20th Century

Background:

My class is going on a *real* field trip to the **Tenement Museum**. I used the Web site as preparation. Visiting the Web site gave the students the opportunity to learn about turn of the century tenement life in New York City and to formulate some questions prior to the trip.

Steps for Learners:

a. Open the Internet by double-clicking on the Netscape icon.

b. Type in the following address in the location bar:

http://www.wnet.org/tenement
and press Enter

c. Now you're at the Home Page of the *Tenement Museum*. Answer the following questions on your handout.

1. Where is the museum? Write down the address. If you have time at the end of class, go to **Yahoo** at **http://www.yahoo.com** and print out a map of the neighborhood.

2. Click on **Log Cabin**

3. How many people lived in the *Urban Log Cabin* between 1870 and 1915?

LESSON PLAN 8
Virtual Field Trip to the
Lower Eastside Tenament Museum

4. Visit one room in the building in 1870. Describe the room and the family in as much detail as you can. Don't copy the words from the computer – use your own words.

5. Now look at the same room in the building in 1915. Describe the family that lived there then.

6. What differences do you notice in the room and the families in 1870 and 1915?

7. Where did most immigrants living on the Lower Eastside in the 1840's come from? Why?

8. How many people lived on the Lower Eastside in 1864? How many people lived in the whole city?

9. Read about 97 Orchard Street. Write at least three things you find interesting about it. (Were there any bathrooms? Did they have heat? How did they dispose of garbage?)

10. What was the *Old Law*? List two requirements of the law. Why do you think the *Old Law* and the *Tenement House Act of 1901* were necessary?

LESSON PLAN 9
Grammar/American Popular Culture
Creator: Emily Hacker

Lesson on Superlatives

Web Site:

Roadside America
http://www.roadsideamerica.com

Steps

Pre-computer classroom activity

1. Class Brainstorm/Mind Map:

   a. What are some tourist attractions in NYC?

   b. What are some of the largest, smallest, tallest, strangest and most amazing things you have seen in the United States?

Note: Additional preparatory activities might include a lesson on U.S. geography.

Computer/online activity

2. Go to **Roadside America** at **http://www.roadsideamerica.com**
   Explain to students that this is a Web site that features the most unusual tourist attractions in the U.S.

3. Click on **The Electric Map**

4. Instruct students (working in small groups or independently) to select three states. Students click on the state (from the map or the list) and read about the tourist attractions on that state. At each state instruct students to make a list of the largest, small-

Class/Level:

ESOL Beginner to Intermediate

Objectives:

- To learn how to use superlatives
- To learn new superlatives and other vocabulary
- To gain an understanding of American popular culture

est, tallest, shortest and strangest attractions they read about. Depending on their ESL level they can also write descriptions of the attractions.

5. Ask students to report back to the class on the attractions they visited.

Follow-up Activities

For a family literacy activity, ask students to select one tourist attraction from **Roadside America** their children would find interesting, funny or weird and to write a detailed description of the selected attraction. Ask them to share the description with their children who will then draw a picture of the attraction above or beneath their parent's text. The next day, ask students to share the illustrations in class. For fun they can compare their child's drawing with the photograph of the attraction on the Web site.

section six

Professional Development and the Internet

The Internet is not just for students. There are numerous opportunities for educators to enrich all aspects of their professional development online. The Internet can be especially beneficial to teachers lacking a professional community, due to the nature of part-time employment, geographic location and a variety of other factors. Many teachers have found communities of colleagues on the Internet via Listservs, regular E-mail, Chat and Bulletin Boards (also called Message Boards, Discussion Groups and Forums). Some people have concerns that the online environment is not conducive to complex ideas or reflection. If they spent time exploring the archives of the literacy listservs hosted by the National Institute for Literacy, they would see that the opposite can be true, provided that the online tool is well designed and well moderated. On these listservs, practitioners from across the country are asking questions and sharing advice on a wide range of critical issues in adult education.

Eastern LINCS - Discussion Groups and Listservs http://hub1.worlded.org/ADMIN/discuss.htm

Listservs can also be a valuable tool for increasing communication and collaboration in staff development activities that span a period of time. They are especially useful if your workshop participants are separated geographically. A listserv enabled the thirty-two World Wide Web Institute participants to communicate easily with each other during the month-long training. The listserv also provided a way for the facilitators to automatically send messages to the entire group of participants, with a single e-mail transaction. Listservs are generally easy and inexpensive to set up through your Internet Service Provider. You can also set them up for free through several Web-based services, such as **Onelist: Free Mailing Lists**, at **http://www.onelist.com/.** To get an idea of how teachers can use a listserv as a forum for posing questions and exploring issues together, read the following excerpts from the LAC Institute listserv:

> *I've been trying to integrate technology into my classroom for years, from word processing the old Apple IIE's years ago, to research on the Internet today. Yet I'm still not certain what "integrate" actually means in this context. I like the idea of project-based learning with an interdisciplinary focus, where computers and other technology are part of a set of resources available to*

students for research, exploration, learning and self-expression. I'm not sure how much of that is possible in the adult education classroom.

There's a lot of resistance among the staff who don't want to "take away from class time" by bringing students into the lab. Some staff members are intimidated by the computers and therefore don't feel comfortable using them with their students...Other staff members seem to feel that computers can do the job of teachers, that simply finding something on the Internet will make students better readers. Unfortunately, even when students access information on the Web, they often can't understand it.

This morning I took my class to our computer lab and had them look up the Women's History Project. Students had been given the task of writing a narrative about a woman they knew and admired, or alternatively about a woman they admired from history or contemporary society. Mostly, they explored. It was especially fun to see the students who had never been on the Net before become adept at using the mouse. I went around and helped them and moved students so that the ones who had the most experience were teaching the others.

Of course, not all online discussions attempt meaningful dialogue. Of the millions of people communicating online everyday, more are looking for dates, new cars, or bargain flights than are having deep discussions about educational philosophy, but these discussions do exist. More importantly, the Internet is an open, democratic environment. If a discussion you're looking for isn't already occurring somewhere online, you can start it and, as a character in the film *Field of Dreams* said, "if you build it, people will come." To search by topic for existing listservs go to **LISZT: the mailing list directory,** at **http://www.liszt.com.**

Adult Literacy Listservs

NIFL Listservs

You can subscribe to any of the following listservs directly through the **NIFL** Web site. Go to the **Forums** list at **http://www.nifl.gov/forums.html** and follow the directions.

NIFL-ALLD (National Institute for Literacy)
The focus of this list is adult learning disabilities.

NIFL-Family (National Institute for Literacy)

The focus of this list is family literacy.

NIFL-Health (National Institute for Literacy)

The NIFL-HEALTH list is an online discussion group linking literacy practitioners, health educators, medical providers, researchers, policy makers, and other interested parties.

NIFL-Workplace (National Institute for Literacy)

The focus of this list is workplace literacy education.

NLA: National Literacy Advocacy

The focus of this list is to keep advocates informed about critical legislative and public policy issues so that timely, coordinated policy actions are possible.

Numeracy

The focus of this list is numeracy literacy education.

In addition to a listserv, a Web page can be a very useful supplement for long-term staff development activities. A simple Web page can include the agenda, schedule, activities, homework assignments and a list of links to other Web resources you want participants to use during the workshop. A more complex page can include an online discussion area, or bulletin board, where participants can post and reply to messages on workshop issues and projects. The unique feature of bulletin boards offer is that the messages are organized by subject and stored on the Web, so you can keep track of and participate in discussions with a sense of continuity and history. Setting up a bulletin board requires advanced programming skills, but many popular Internet Service Providers, like **Mindspring** at **http://www.mindspring.net,** offer easy to set-up bulletin or message boards as part of their member services. For an example of simple Web sites developed to be the virtual space for staff development institutes, see the home pages of the **World Wide Web Institute**, at **http://www.lacnyc.org/technology/institute/world.htm** and the **Teachers, Technology and Leadership Institute** at **http://www.lacnyc.org/technology/TTL.**

The communication and networking possibilities the Web offers to literacy practitioners are increasing daily. Beyond lesson planning, the Web can be a valuable

resource for research connected with fund-raising, proposal writing and curriculum development. There are opportunities for practitioners to take online classes – an excellent way to learn by doing. **LitTeacher,** a project developed in partnership by the National Center on Adult Literacy (NCAL), Kentucky Educational Television (KET) and PBS, will soon offer a variety of opportunities for online staff development. You can learn more about **LitTeacher** and the other resources provided through this project, at **http://www.pbs.org/adultlearning/literacy/index.html.**

Once you begin actively exploring the Web, it shouldn't take long for you to find a variety of ways that it can enhance your work and enrich your students' education. After exploring Web resources in a workshop on the Internet and workforce preparation, a literacy practitioner wrote in her evaluation, "I can envision teachers, students and job developers [in the computer lab] till midnight!"

appendix

Directory of Adult Literacy, ESOL and Nonprofit Resources on the World Wide Web

Literacy Organizations

Adult Literacy Resource Institute (Boston)
http://www2.wgbh.org/MBCWEIS/LTC/ALRI/alri.html

Eastern LINCS: Literacy Information & Communication System
http://easternlincs.worlded.org

Hudson River Center for Program Development
http://www.hudrivctr.org

International Literacy Institute
http://ili2.literacy.upenn.edu/ILI

Literacy Assistance Center.
http://www.lacnyc.org

Literacy Online (NCAL)
http://literacyonline.org

National Center for the Study of Adult Learning and Literacy (NCSALL)
http://hugse1.harvard.edu/~ncsall

National Center on Adult Literacy (NCAL)
http://litserver.literacy.upenn.edu

National Institute for Literacy (NIFL)
http://novel.nifl.gov

NIFL Regional LINCS Web Sites (links to literacy organizations in all 50 US states and the territories)
http://www.nifl.gov/hubsmap.htm

New York Public Library – Office of Special Services
http://www.nypl.org/branch/oss

New York State Education Department: Office of Workforce Preparation and Continuing Education
http://www.nysed.gov/workforce/work.html

Outreach and Technical Assistance Network (OTAN)
http://www.otan.dni.us

Literacy and ESOL Instructional Resources

Archie Willard - Learning Disability Home Page
http://207.28.234.137/archiew.html

ABE Students at Halo
http://k12s.phast.umass.edu/~halo1/students/index.html

AskERIC
http://ericir.syr.edu

California Distance Learning Project
http://www.otan.dni.us/cdlp/cdlp.html

CNN's Interactive Learning Resources for Teaching
http://www.cnnsf.com/cgi-bin/cnn/education/ed.cgi

Dave's ESL Cafe
http://www.pacificnet.net/~sperling/eslcafe.html

del Corazon! is an interactive, educational Webzine for teachers and students
http://nmaa-ryder.si.edu/webzine/index.html

E-mail Projects Home Page
http://www.otan.dni.us/webfarm/emailproject/email.htm

EnglishTown
http://www.englishtown.com

ERIC: Clearinghouse on Adult, Career and Vocational Education
http://ericacve.org

ERIC Clearinghouse on Science, Mathematics and Environmental Education
http://www.ericse.org

ERIC Clearinghouse on Urban Education
http://eric-web.tc.columbia.edu

ESL Home Page
http://www.lang.uiuc.edu/r-li5/esl

ESL Virtual Catalog
http://www.pvp.com/esl.htm

EX*CHANGE (Exchange, Xross Cultural, Hypertextual Academy of Non-Native Gatherings in English
http://deil.lang.uiuc.edu/exchange

Fluency Through Fables
http://www.comenius.com/fable/index.html

How to Feel Good: Learning to Relax and Exercise
http://www2.wgbh.org/MBCWEIS/LTC/ALRI/feelgood.html

Human Language Page
http://www.june29.com/HLP

International Tutoring Foundation, Inc.
http://edie.cprost.sfu.ca/~it

Inquiry Maps
http://www2.wgbh.org/MBCWEIS/LTC/ALRI/I.M.html

Lifelong Learning Online
http://www.otan.dni.us/cdlp/lllo/home.html

Mega Math
http://www.c3.lanl.gov/mega-math/welcome.html

PBS Adult Learning Services
http://www.pbs.org/adultlearning

PBS LiteracyLink
http://www.pbs.org/literacy

Project Vote Smart
http://www.vote-smart.org

Purdue University's On-Line Writing Lab
http://owl.english.purdue.edu

TESOL Home Page
http://www.tesol.com

TOEFL Home Page
http://www.toefl.org

UNESCO's Education Information Service
http://www.educatio1n.unesco.org/index.html

The Virtual English Language Center
http://www.comenius.com

Web-based Lesson Plan Resources

Teaching & Learning with Internet-based Resources
http://www.nifl.gov/susanc/inthome.htm

PBS Electronic Field Trips
http://www.pbs.org/learn/fieldtrips

wNetSchool Original Lesson Plans
http://www.wnet.org/wnetschool/origlessons

Web-Based Lesson Plans
http://www2.wgbh.org/MBCWEIS/LTC/ALRI/lessonplans.html

World Wide Web Institute: Web-based Lesson Plan Gallery
http://www.lacnyc.org/technology/institute/gallery.htm

Web-based Lessons Developed by Susan Boone
http://www.crpc.rice.edu/CRPC/GT/sboone/Lessons/lptitle.html

Technology and Education Resources

Basic Internet Guides
http://www.rpi.edu/Internet/InetGuides.html

Center for Children and Technology
http://www.edc.org/CCT/

Computers for Learning
http://www.computers.fed.gov

Community Technology Centers Network (CTCNet)
http://www.ctcnet.org

EdWeb
http://edweb.cnidr.org:90/

Education Development Center
http://www.edc.org

Educational Software Institute
http://www.edsoft.com/

Evaluation Criteria for Web Sites
http://www.ala.org/ICONN/rating.html

From Now On - a monthly electronic journal devoted to educational technology
http://fromnowon.org

IBM Kiosk for Education
http://www.hied.ibm.com/

International Society for Technology in Education
http://www.iste.org/

MOUSE (Making Opportunities for Upgrading Schools & Education)
http://www.nymouse.org

NetTech (Northeast Regional Technology in Education Consortium)
http://www.nettech.org

New York New Media Association
http://www.nynma.org

Patrick Crispen's Internet Roadmap
http://www.brandonu.ca/~ennsnr/Resources/Roadmap/Welcome.html

PC Novice Guide Directory
http://www.pcnovice.com/nov1.htm

Teaching with Technology
http://www.wam.umd.edu/%7Emlhall/teaching.html

TERC
http://www.terc.edu

THE Journal
http://www.thejournal.com

Virtual Computer Library
http://www.utexas.edu/computer/vcl

Funding, Grant and Government Information Resources

Benton Foundation
http://www.benton.org

CapWeb: A Guide to the U.S. Congress
http://policy.net/capWeb/congress.html

Council On Foundations
http://www.cof.org

David Lamb's Prospect Research Page
http://weber.u.washington.edu/~dlamb/research.html

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FEDIX (Federal Information Exchange)
http://web.fie.com

Federal Web Locator
http://www.law.vill.edu/Fed-Agency/fedwebloc.html

The Foundation Center
http://fdncenter.org

The Grantsmanship Center
http://www.tgci.com

GuideStar Database of Nonprofit Organizations
http://www.guidestar.org

HUD (Department of Housing and Urban Development)
http://www.hud.gov

Internet Nonprofit Center's Nonprofit Locator
http://www.nonprofits.org/library/gov/irs/search_irs.shtml

Internet Prospector
http://plains.uwyo.edu/~prospect

National Center for Nonprofit Boards
http://www.ncnb.org

National Charities Information
http://www.give.org

New York Cares
http://www.ny.cares.org

New York Regional Association of Grantmakers (NYRAG)
http://www.nyrag.org

New York State Education Department
http://www.nysed.gov

Philanthropy Journal Online
http://www.philanthropy-journal.org

Thomas: Legislative Information on the Internet
http://thomas.loc.gov/home/thomas2.html

TIIAP (Telecommunications and Information Infrastructure Assistance Program)
http://www.ntia.doc.gov/tiiap

U.S. Department of Education
http://www.ed.gov

Employment, Training & Workplace Literacy

America's Job Bank
http://www.ajb.dni.us

American Public Human Services Association
http://www.apwa.org

Cornell School of Industrial & Labor Relations
http://www.ilr.cornell.edu

EOP's Career Center for Workforce Diversity
http://www.eop.com/ccwd/homepage.html

Empowerment Zone and Enterprise Community Program (EZ/EC)
http://www.ezec.gov

ETA Welfare to Work Web Site
http://wtw.doleta.gov

Infoseek>Careers
http://www.infoseek.com

Minorities Job Bank
http://www.minorities-jb.com/default.htm

Monster Board
http://www.monster.com

National Association of Workforce Development Professionals
http://www.work-web.com/nawdp

National Center for Research in Vocational Education
http://vocserve.berkeley.edu

New York State Department of Labor
http://www.labor.state.ny.us

New York State Education Department Office of Workforce and Continuing Education
http://www.nysed.gov/workforce/work.html

New York State School to Work Online
http://www.nysed.gov/workforce/stw.html

The 1998-99 Occupational Outlook Handbook
http://stats.bls.gov/ocohome.htm

O*NET (The Occupational Information Network
http://www.doleta.gov/programs/onet

PBS Adult Learning Services: Ready to Earn
http://www.pbs.org/adultlearning/als/rte

SCANS/2000 (Johns Hopkins University Institute for Policy Studies)
http://infinia.wpmc.jhu.edu

School-to-Work
http://www.stw.ed.gov

StudentCenter.com
http://www.aboutwork.com/indexsc.html

TECHlinx Career Mall
http://www.Techlinx.org/mall/index.htm

T.H.E. Journal: Roadmap to the Internet, Career Resources
http://www.thejournal.com/features/rdmap/career.asp

TTRC (resources for workforce development professionals)
http://www.ttrc.doleta.gov

Welfare Information Network
http://www.welfareinfo.org

Welfare to Work Partnership
http://www.welfaretowork.org.

What Color is Your Parachute
http://www.washingtonpost.com/wp-adv/classifieds/careerpost/parahute/front.htm

Work Web Employment and Training Resource
http://www.work-web.co

Yahoo>Education>Career & Vocational
http://www.yahoo.com

Youth Careers: New York State Department of Labor
http://www.labor.state.ny.us/html/youth/youth.htm

Family Literacy Resources

The Barbara Bush Foundation for Family Literacy
http://www.barbarabushfoundation.com

Children's Literature Web Guide
http://www.ucalgary.ca/~dkbrown/index.html

Children, Youth and Family Links
http://www.cyfc.umn.edu/cyfclinks.html

ERIC Clearinghouse on Elementary and Early Childhood Education
http://ericps.ed.uiuc.edu

Family Education, Adult Literacy and English as a Second Language
http://www.itouch.net/~klearn/familyed.html

Family Involvement
http://www.ed.gov/Family

National Center for Family Literacy
http://www.vmarketing.com/famlit.org

National Coalition for Parent Involvement in Education (NCPIE)
http://www.ncpie.org

National Parent Information Network
http://www.npin.org

Parents and Children Together On-Line
http://www.indiana.edu/~eric_rec/fl/pcto/menu.html

ZERO TO THREE: National Center for Infants, Toddlers and Families
http://www.zerotothree.org

Multicultural Education Resources

Black History Month World Wide Web Scavenger Hunt
http://www.lacnyc.org/technology/blackhistory.htm

Pathways to Diversity
http://usc.edu/Library/QF/diversity

CLNET Diversity Page
http://latino.sscnet.ucla.edu/diversity1.html

Gifts of Speech
http://gos.sbc.edu

The Faces of Science: African Americans in the Sciences
http://www.lib.lsu.edu/chem/display/faces.html

Multicultural Paths
http://curry.edschool.virginia.edu/go/multicultural/sites1.html

Voices from the Gaps: Women Writers of Color
http://www-engl.cla.umn.edu/lkd/vfg/VFGHome

Women's History Month World Wide Web Scavenger Hunt
http://www.lacnyc.org/technology/womens_history.htm

Technology Planning Resources

The Benton Foundation: Technology Planning and Implementation
http://www.benton.org/Library/Schools/resources4.html

Eastern LINCS: Technology Planning Leadership Program
http://easternlincs.worlded.org/ADMIN/techlead/index.htm

National Center for Technology Planning
http://www.nctp.com

Web Site Evaluation Tools

Evaluating World Wide Web Information
http://thorplus.lib.purdue.edu/research/classes/gs175/3gs175/evaluation.html

WWW CyberGuides
http://www.cyberbee.com/guides.html

Evaluation Criteria Rating System for Web Sites
http://www.ala.org/ICONN/rating.html

Web Site Construction

Web Page Construction Helpers
http://www.bhs-ms.org/webhelp.htm

HTML Crash Course fo Educators
http://sunsite.unc.edu/edweb/htmlintro.html

Web Teacher
http://www.webteacher.org

Cyberbee Web Construction
http://www.cyberbee.com/schoolpage/school.html

Eastern LINCS Web Publishing Resources
http://easternlincs.worlded.org/ADMIN/webpub/index.htm

Adult Literacy Internet Directories

The Adult Education Teacher's Annotated Webliography
http://www2.wgbh.org/MBCWEIS/LTC/ALRI/webliography.html

Internet Directory of Literacy and Adult Education Resources
http://novel.nifl.gov/litdir/index.html

Literacy Assistance Center Links
http://www.lacnyc.org/links/index.html

The Literacy List
http://www2.wgbh.org/MBCWEIS/LTC/ALRI/LiteracyList.html

Exemplary World Wide Web Education Sites
http://www.ncsa.uiuc.edu/edu/cybered/cybered_hotlist.html

T.H.E. Journal: Roadmap to the Web for Educators II
http://www.thejournal.com/roadmap97/roadmap2.asp

Search Engines

AltaVista
http://altavista.digital.com

Excite
http://www.excite.co1m

Hotbot
http://www.hotbot.com

InfoSeek
http://www.infoseek.com

Lycos
http://lycos.cs.cmu.edu

The Spider's Apprentice (to learn about search engines)
http://www.monash.com/spidap.html

WebCrawler
http://www.webcrawler.com

Yahoo
http://www.yahoo.com

Literacy Assistance Center

The Literacy Assistance Center (LAC) is the training, referral and information hub for adult and youth literacy programs in NYC. Our mission is to support the expansion of quality literacy services. Our services include: the ***Literacy Hotline*** (212/803-3333), the **Computer Learning Center**, the **Dan Rabideau Clearinghouse** of resource materials, the ***Literacy Update*** newsletter, professional development and the ***Funding for Literacy*** workshop series. Integrating technology into the classroom – and training practitioners to take leadership roles in integrating technology across their programs – are among our highest priorities. For more information and to request additional copies of this guide, call 212/803-3300 or visit our Website at **http://www.lacnyc.org**

NetTech, the Northeast Regional Technology in Education Consortium

NetTech is a partnership designed to provide the vision, experience, and expertise needed to assist schools (K-12) and other educational institutions in planning, implementing, continuously evaluating, and refining effective educational uses of technology. Led by the City University of New York (CUNY), NetTech is designed to address the critical gaps in educational technology policy and infrastructure, while pooling the considerable expertise of its partners, which include Brown University, Educational Development Center, Ohio State University, TERC, and the University of Maryland. For more information, contact the project co-directors: Bonnie Brownstein, (212) 541-0972 and Michael Ribaudo, (212) 541-0972 or visit Nettech's Website at **http://www.nettech.org**

TERC

For overseeing the production and publication of this guide, Nettech partner TERC had lead responsibility. TERC is a nonprofit research and development organization committed to improving mathematics, science and technology teaching and learning. Founded in 1965, TERC is internationally recognized for creating innovative curricula, fostering teacher professional development, pioneering creative uses of technology in education, contributing to educators' understanding of learning and teaching, and developing equitable opportunities for underserved learners. For more information, call (617) 547-0430 or visit TERC's Website at **http://www.terc.edu**